

## **Application Advisory**

AA-6(Amplifier- Transient Voltage Protection)

08901315

Assemblies Affected:

MRC-44, MRC-88, PA-1235-series, PA-635 and 435-series. Includes 'X' versions and International (230VAC) versions.

**Purpose** 

Protect PA series amplifier installations from excessive voltage exposure due to Lightening or other major power fluctuations.

Cause:

Installations with long speaker runs, outdoor cable runs, cables run in close proximity of TV Antennas and/or Cable inlets in regions where severe Thunderstorms are common may act as antennas allowing major voltage spikes to reach the amplifier output terminals.

Solution:

This kit contains four TVS (Transient Voltage Suppression) devices and eight insulation sleeves. One kit will support two stereo-pairs. Kit PN#08400792.

Note: The Xantech part number for the individual TVS devices is 06500105.

The TVS Diode is meant to be placed across the '+' and '-' terminals directly on the Amplifier Output channels. This will suppress any unwanted voltage being transmitted back to the amplifier along the speaker wires.

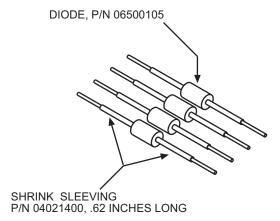


Figure 1: Transient Voltage Suppression (TVS) Diode

## Installation Procedure:

Refer to **Figure 1** and **Figure 2** for the following instructions:Note: Modification does not affect sonic quality Note: This modification does not apply to PA4100X amplifiers.

- 1. Make sure Amplifier is powered OFF and disconnected from the AC power line.
- 2. Loosen all 4 screws of the WECO connector to its widest setting.
- 3. Place the insulation sleeves (PN# 04021400) onto **both** leads of the TVS diode as shown in **Figure 1**.

**Note:** Do not cut the leads of the TVS Diode **Note:** Insulation sleeves **must** be placed on both



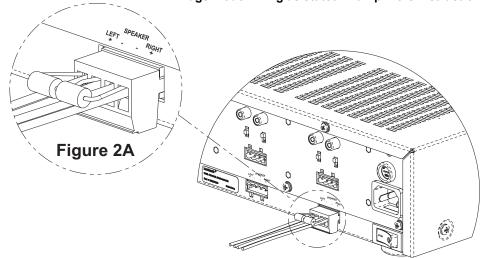
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leads of the TVS diode before installation to prevent possible electrical short.

- 4. Bend the leads of the TVS at 90 degrees right at the barrel of the diode.
- 5. Connect the Left speaker leads to the proper '+' and '-' terminals of the WECO connector.
- 6. Carefully insert the leads of the TVS diode to each of the same '+' and '-' terminals of the WECO as in step 5. (see **Figure 2a**).
- 7. Tighten the 2 screws of the populated terminals of the WECO connector
- 8. Connect the Right speaker leads to the remaining '+' and '-' terminals of the same WECO connector as in Step 5.
- 9. Carefully insert the leads of the TVS diode to each of the same '+' and '-' terminals of the WECO as in step 8.
- 10. Tighten the remaining 2 screws of the populated terminals of the WECO connector.
- 11. Inspect all terminals of the WECO connector making sure:
  - a. TVS diodes are placed on the proper '+' and '-' terminal pairs along with the Speaker leads
  - b. There are no electrical shorts between any of the WECO terminals
  - c. Screws on WECO connector are properly tightened.
- 12. Place the WECO connector on the proper output of the amplifier to be protected (See **Figure 2**).

NOTE: For Amplifiers in Bridged Mode, install TVS the same as in Stereo Mode but Speaker Leads will wire according to Bridge Mode wiring as stated in amplifiers instruction Manual



**Figure 2: TVS Diode Installation**